



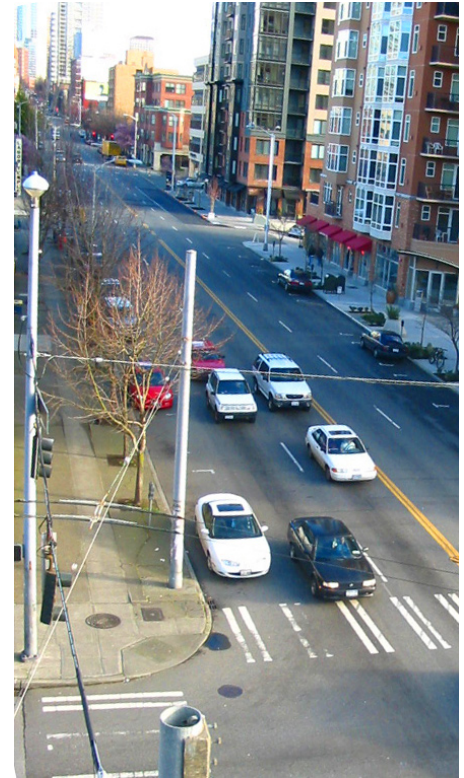
EAGLE EPAC® M50 Series Controller

A trendsetter since its introduction, the M50 Series provides state-of-the-art features and functionality, including SEPAC®, *NextPhase*®, and SafeSuite® local controller software.

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The optional next generation engine board, along with SafeSuite, allows the M50 Series to run multiple transportation software applications simultaneously.



The EAGLE EPAC M50 Series NEMA controller is an innovative, fully actuated controller unit with a full compliment of operational, programming, and diagnostic capabilities.

The M50 Series consists of the M51, M52, M53, and ATCnx® models. The M50 ATCnx includes the NEMA/AASHTO/ITE next generation engine board, which is available as an option for the other M50 models. The M50 can be loaded with SEPAC, *NextPhase*, SeMARC®, and/or SafeSuite (SafeSuite requires next generation engine board) – providing all the features of that particular proven software package.

The M50 series supports a variety of cabinet styles, including NEMA TS-1, TS-2 Type 1, and TS-2 Type 2; CALTRANS 332, 336, 340, 342, and 356; and NEMA/AASHTO/ITE 340, 342 and 356 ITS.

The M50 series meets and exceeds a number of industry standards and specifications.

- Exceeds NEMA TS 1-1989 Standard for Actuated Controller Unit;
- Exceeds NEMA TS 2-1998 Standard for Actuated Controller Unit;

- Exceeds NEMA TS 2 -2003 Standard for Traffic Controller Assemblies with NTCIP Requirements;
- Exceeds NEMA/AASHTO/ITE Rev 5.2 Standard for Advanced Transportation Controller (with next generation engine board);
- M50 ATCnx is compatible with 2070 ATC (physical dimensions, cabinet connectors, modems, software) –
 - CALTRANS TEES 2002;
 - NEMA/AASHTO/ITE 2070 ATC.

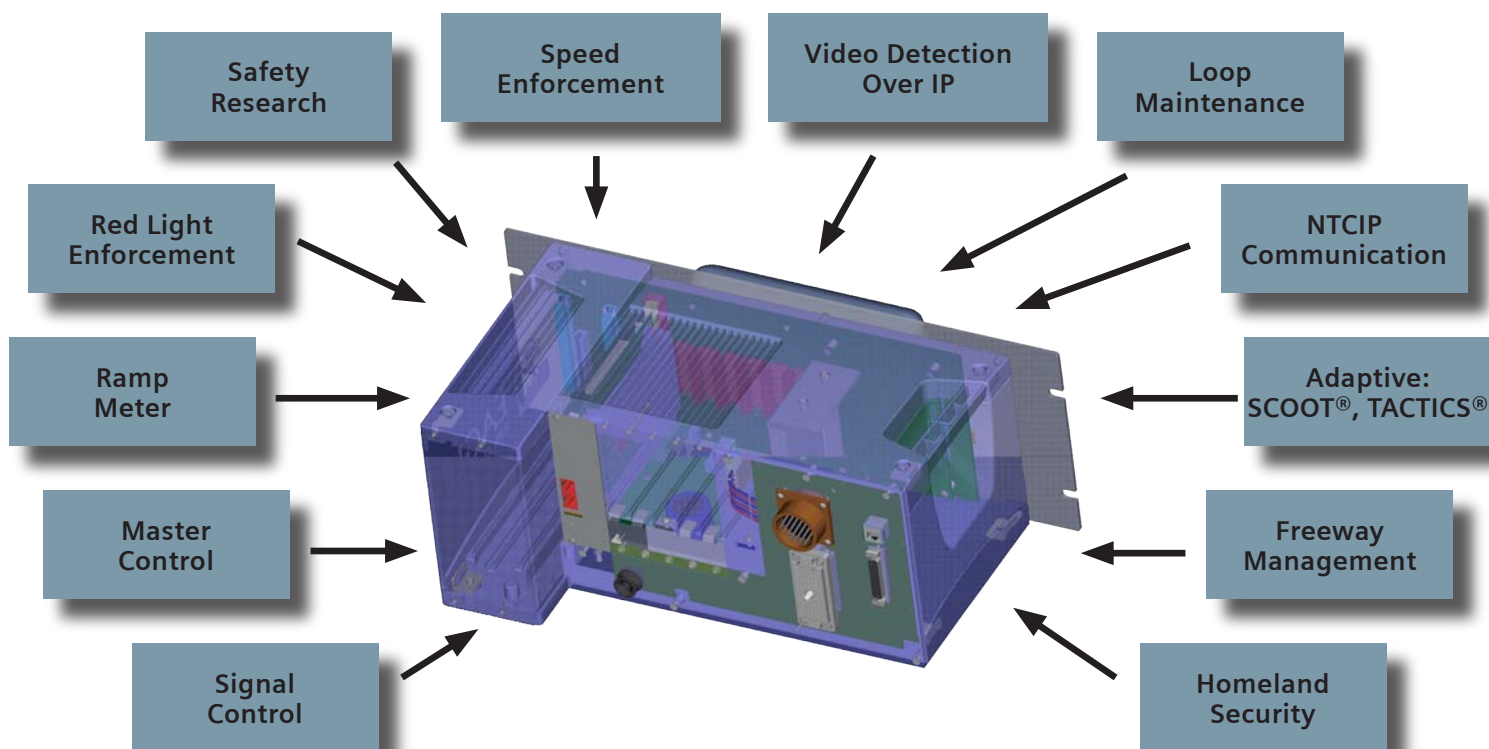
The M50 series has many advanced functionalities beyond the normal NEMA standards.

- High impact polycarbonate case – makes it lighter than other NEMA controllers;
- External Infrared port for communication with laptops and PDAs;
- Built-in external 10 Base-T Ethernet port – with configurable IP;
- 8MB of flash memory – eliminates need for EPROM chips;
- Industry standard 3-U expansion slots;
- Standard ATC Modem options;
- Optional Datakey® module allows timing data to be easily carried from controller to controller;

- Removable hand-held front panel display that can snap to the front of the unit or connect via a cable – makes it convenient to program the M50.

In addition to the standard M50 features, the ATCnx offers new capabilities and enhancements in hardware design and communications.

- Meets ITE Next-Generation ATC standard;
- Increased support for IP-enabled intersection technology;
- Rack-mounted design, with back-of-cabinet wiring and access;
- USB port on front of controller - supports USB memory stick;
- Built-in Datakey access;
- ITS Cabinet connectors for SB1/SB2;
- Adapts to 15-pin NEMA TS-2 Port 1;
- Optional C1S and C11S connectors for 332 Cabinet;
- Two (2) separate 100-Base T Ethernet links, each with a 2-port hub – connect to IP-enabled intersection devices and the central network through back-of-cabinet wiring, accessing both via laptop or PDA through the front-of-controller connections, all without unplugging anything.



The next generation engine board, standard on the ATCnx and available as an option for the other M50 models, provides advanced functionality and software support.

- Faster, more powerful engine board – at least an order of magnitude faster than the 2070 ATC engine board – with substantial increase in flash memory drive and RAM;
- Runs both Linux and OS-9 operating systems, providing more options for third-party development;
- Preloaded with the SafeSuite software package, which includes *NextPhase*, SEPAC, SeMARC, NTCIP, Monitor, Enforce, and more, making it a comprehensive intersection control and monitoring system;
- Can run multiple-concurrent transportation software applications, offering true multitasking traffic control.

The M50 controller's removable front panel is an alphanumeric backlit LCD display unit with 8-lines and 40 characters per line.

Programming is easy and error free using English Language Menus. Within a menu, each parameter can be viewed

and a cursor moved to that parameter for changes. Related parameters are visible simultaneously, making verification an easy matter. The screen provides both programming area identification and editing prompts.

The display unit connects to the controller via a dedicated C60 port.

The removable front panel works with all M50 models, as well as Siemens' next generation Central Business District Cabinet [CBD]. Because they are portable and work with all M50 controllers, a agency only needs as many front panels as it has field technicians (plus a few spares). This provides agencies a cost savings on installations of M50s and CBDs.

The M50 Series Controller Unit is designed for efficient operation and ease of maintenance.

The chassis is made of injection molded, high impact polycarbonate and is designed for easy access to the boards for testing without disassembly. A molded handle makes the lightweight controller easy to carry. The ATCnx features a metal face-plate for rack-mounting.

Adjustable rubber feet (except on ATCnx) along the front allow users to change the angle of the display and create more or less space around the controller. Grounding metal feet (except ATCnx) in the rear stabilize the controller. The controller is convection-cooled via vents along the sides and/or back of the controller.

NEMA TS-2 controllers provide performance and diagnostic enhancements over TS-1 controllers.

TS-2, Type 1 and Type 2 controllers use high speed data channels between all major components within the terminal and facilities. In addition, Type 2 controllers provides backward compatibility with TS-1 controllers through MSA, MSB and MSC connectors, as well as a 37-pin "D" connector.

Controller assemblies with TS-2 detector racks provide increased capability, consume less power, and provide additional diagnostic data to the controller via the SDLC port, allowing the controller to take corrective action much earlier than one based on internal diagnostics.

Physical Dimensions – M51, M52, M53
7" H x 15.5" W x 9.5" D
(177 mm H x 394 mm W x 241 mm D)

Physical Dimensions – ATCnx
7" H x 19" W x 9.5" D
(177 mm H x 483 mm W x 241 mm D)

Weight
8 lbs. / 4 kg (typical)

Power Consumption
25 Watts (typical) • 120 Watts (max)
89 to 135 VAC • 57 to 63 Hz

Temperature
-30° F to +165° F
(-34° C to +74° C)

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